

Claims

[c1] WHAT IS CLAIMED IS:

1.A cleaning tool for a vacuum cleaning device, the cleaning tool comprising:
a housing;
a motor arranged in the housing;
a tool carrier and a rotatingly driven working tool acting on a surface to be cleaned, wherein the working tool has two ends rotatably supported in the tool carrier;
wherein the tool carrier and the working tool form a changing unit and the tool carrier is detachably secured in a mounted position on the housing by catch elements;
a gear system connected between the motor and the working tool, wherein the motor drives via the gear system the working tool;
wherein the gear system has a driving wheel driven by the motor and a driven wheel fixedly connected to the working tool;
wherein the tool carrier and the housing have wall sections, respectively, that overlap one another and align the tool carrier relative to the housing and the driven wheel relative to the driving wheel, when the changing unit is inserted into the housing.

- [c2] 2. The cleaning tool according to claim 1, wherein the housing has a receiving slot and wherein the tool carrier is insertable through the receiving slot into the housing.
- [c3] 3. The cleaning tool according to claim 2, wherein the tool carrier has a working slot through which the working tool extends outwardly for acting on a surface to be cleaned.
- [c4] 4. The cleaning tool according to claim 2, wherein the tool carrier forms a closed frame that in the mounted position is surrounded by a frame of the receiving slot substantially without play.
- [c5] 5. The cleaning tool according to claim 1, wherein the tool carrier has a glide plate for resting on a surface to be cleaned.
- [c6] 6. The cleaning tool according to claim 1, wherein the tool carrier is secured in the housing by a catch connection comprised of the catch elements, wherein the catch connection is provided in the area of the overlapping wall sections.
- [c7] 7. The cleaning tool according to claim 6, wherein the tool carrier has at least one projection engaging an opening on a top part of the housing.

- [c8] 8. The cleaning tool according to claim 7, wherein the at least one projection is positioned at a level of the catch connection and is an actuating element for releasing the catch connection.
- [c9] 9. The cleaning tool according to claim 1, wherein the gear system has an intermediate wheel having a peripheral area engaging the driven wheel, wherein engagement of the driven wheel and of the intermediate wheel is releasable without requiring a tool.
- [c10] 10. The cleaning tool according to claim 9, wherein the driving wheel and the driven wheel are V-belt pulleys, wherein the intermediate wheel is provided as a driving connection between the driving wheel and the driven wheel and is configured as a V-gear having an outer periphery engaging V-grooves of the driving and driven wheels.
- [c11] 11. The cleaning tool according to claim 10, wherein the outer periphery of the V-gear is elastic.
- [c12] 12. The cleaning tool according to claim 11, wherein the outer periphery is comprised of an elastic V-belt ring.
- [c13] 13. The cleaning tool according to claim 12, wherein the V-belt ring has a trapezoidal cross-section.

[c14] 14. The cleaning tool according to claim 3, wherein the housing comprises a vacuum channel and a connecting socket for a vacuum pipe, wherein the vacuum channel is positioned between a bottom plate of the housing and a shaft of the drive motor, wherein a vacuum flow entering through the working slot is guided via the vacuum channel to the connecting socket.

[c15] 15. The cleaning tool according to claim 14, wherein the vacuum channel is delimited by the drive motor.

[c16] 16. The cleaning tool according to claim 14, wherein an exit cross-section of the vacuum channel is greater than an intake cross-section of the vacuum channel.

[c17] 17. The cleaning tool according to claim 16, wherein the exit cross-section is greater than a flow cross-section of the connecting socket.

[c18] 18. The cleaning tool according to claim 16, wherein the housing further comprises a collector connected between the vacuum channel and the connecting socket, wherein the collector forms a transition of the exit cross-section of the vacuum channel into the flow cross-section of the connecting socket.

[c19] 19. The cleaning tool according to claim 18, wherein the

collector is pivotable about a pivot axis extending transversely relative to the connecting socket in the housing.

[c20] 20. The cleaning tool according to claim 19, wherein the pivot axis is arranged at an end of the collector facing away from the bottom plate.

[c21] 21. The cleaning tool according to claim 18, wherein the collector comprises a guide ramp adjoining the bottom plate and bridging a vertical displacement between the vacuum channel and the connecting socket.

[c22] 22. The cleaning tool according to claim 18, wherein the collector has a width in a direction of the pivot axis matching a width of the connecting socket.

[c23] 23. The cleaning tool according to claim 18, wherein the connecting socket is rotatably supported in a pipe section of the collector.